

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in this Application:

1) (CURRENTLY AMENDED) A composition of matter useful as a phosphor in light emitting diodes, which comprises a material described by the formula:



in which:

M comprises one or more elements selected from the group consisting of: Be, Mg, Ca,

Sr, Ba, Zn, subject to the proviso that Zn is not solely present;

B comprises one or more elements selected from the group consisting of: Eu, Ce, Cu, Ag,

Al, Tb, Sb, Bi, K, Na, Cl, F, Br, I, Mg, Pr, and Mn;

wherein the total amount of B present is any amount between 0.0001% and about 10 % in mole percent based on the total molar weight of said composition, and wherein x and y are each

independently any value between ~~about~~ 0 and ~~about~~ 1, subject to the proviso that the sum of x

and y is equal to any number in the ~~range of between about 0.75 and about 1.25~~. ranges selected from the group consisting of: a) a first range between 0.75 and 1; and b) a second range between

1 and 1.25, but further subject to the proviso that $x + y \neq 1$.

2) (CURRENTLY AMENDED) A composition according to claim 1 wherein $[[0 \leq x \leq 1 \text{ and } 0 \leq y \leq 1]]$ $0 < x \leq 1$ and $0 < y \leq 1$.

3) (CURRENTLY AMENDED) A composition according to claim 1 wherein $0.5 \leq x \leq 1$ and $0 \leq y \leq 0.5$ $0 < y \leq 0.5$.

4) (CURRENTLY AMENDED) A composition according to claim 1 wherein $0 \leq x \leq 0.5$ and $0 \leq y \leq 0.5$ $0 < x \leq 0.5$ and $0 < y \leq 0.5$.

5) (CURRENTLY AMENDED) A composition according to claim 1 wherein $0 \leq x \leq 0.5$ $0 < x \leq 0.5$ and $0.5 \leq y \leq 1.0$.

6) – 7) (CANCELLED)

8) (ORIGINAL) A composition according to claim 1 wherein M comprises one or more elements selected from the group consisting of: calcium and magnesium.

9) (ORIGINAL) A composition according to claim 8 wherein said activator B comprises one or more elements selected from the group consisting of cerium and europium.

10) -11) (CANCELLED)

12) (ORIGINAL) A composition comprising at least two different phosphors according to claim 1.

13) (ORIGINAL) A composition according to claim 1 wherein B comprises a single element selected from the group consisting of: Eu, Ce, Cu, Ag, Al, Tb, Sb, Bi, K, Na, Cl, F, Br, I, Mg, Pr, and Mn.

14) (ORIGINAL) A composition according to claim 1 wherein B comprises two or more elements selected from the group consisting of: Eu, Ce, Cu, Ag, Al, Tb, Sb, Bi, K, Na, Cl, F, Br, I, Mg, Pr, and Mn.

15) (ORIGINAL) A composition according to claim 1 wherein M comprises a single element selected from the group consisting of: Be, Mg, Ca, Sr, and Ba.

16) (ORIGINAL) A composition according to claim 1 wherein M comprises two or more elements selected from the group consisting of: Be, Mg, Ca, Sr, Ba, and Zn.

17) (CURRENTLY AMENDED) A light emitting device comprising:

a) a light source selected from the group consisting of: light-emitting diodes and lasers, wherein said light source emits light having a wavelength of between about 360 and about 480 nanometers; and

b) a phosphor described by the formula:



in which:

M comprises one or more elements selected from the group consisting of: Be, Mg, Ca,

Sr, Ba, Zn, subject to the proviso that Zn is not solely present;

B comprises one or more elements selected from the group consisting of: Eu, Ce, Cu, Ag,

Al, Tb, Sb, Bi, K, Na, Cl, F, Br, I, Mg, Pr, and Mn;

wherein the total amount of B present is any amount between 0.0001% and about 10 % in mole percent based on the total molar weight of said composition, and wherein x and y are each independently any value between ~~about~~ 0 and ~~about~~ 1, subject to the proviso that the sum of x and y is equal to any number in the ~~range of between about 0.75 and about 1.25~~. ranges selected from the group consisting of: a) a first range between 0.75 and 1; and b) a second range between 1 and 1.25, but further subject to the proviso that $x + y \neq 1$.

18) (ORIGINAL) A light emitting device according to claim 17 wherein said phosphor emits white light when contacted with light having a wavelength of between about 360 and about 480 nanometers.

19) (ORIGINAL) A light emitting device according to claim 17 comprising a mixture of at least two different phosphors described by said formula.

20) (ORIGINAL) A light emitting device according to claim 19, wherein said mixture of phosphors emits white light when contacted with light having a wavelength of between about 360 and about 480 nanometers.

21) (ORIGINAL) A light emitting device according to claim 17 wherein M comprises one or more elements selected from the group consisting of: calcium and magnesium.

22) (ORIGINAL) A light emitting device according to claim 17 wherein said activator B comprises one or more elements selected from the group consisting of: cerium and europium.

23) – 24) (CANCELLED)

25) (ORIGINAL) A light emitting device according to claim 17 wherein B comprises a single element selected from the group consisting of: Eu, Ce, Cu, Ag, Al, Tb, Sb, Bi, K, Na, Cl, F, Br, I, Mg, Pr, and Mn.

26) (ORIGINAL) A light emitting device according to claim 17 wherein B comprises two or more elements selected from the group consisting of: Eu, Ce, Cu, Ag, Al, Tb, Sb, Bi, K, Na, Cl, F, Br, I, Mg, Pr, and Mn.

27) (ORIGINAL) A light emitting device according to claim 17 wherein M comprises a single element selected from the group consisting of: Be, Mg, Ca, Sr, and Ba.

28) (CURRENTLY AMENDED) A [[c]] light emitting device according to claim 17 wherein M comprises two or more elements selected from the group consisting of: Be, Mg, Ca, Sr, Ba, and Zn.